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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.	Rulemaking 12-11-005 (Filed November 8, 2012)

COMMENTS OF THE CALIFORNIA CLEAN DG COALITION REGARDING PROPOSED DECISION REVISING THE SELF-GENERATION INCENTIVE PROGRAM PURSUANT TO SENATE BILL 861, ASSEMBLY BILL 1478, AND IMPLEMENTING OTHER CHANGES

Ann L. Trowbridge
DAY CARTER & MURPHY LLP
3620 American River Drive, Suite 205
Sacramento, California 95864
Telephone: (916) 246-7303
FAX: (916) 570-2525
E-mail: atrowbridge@daycartermurphy.com
Attorneys for California Clean DG Coalition

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Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission" or "CPUC"), California Clean DG Coalition ("CCDC") timely files these Comments Regarding Proposed Decision Revising the Self-Generation Incentive Program ("SGIP") Pursuant to Senate Bill ("SB") 861, Assembly Bill 1478, and Implementing Other Changes ("Proposed Decision").

CCDC is an ad hoc group interested in promoting the ability of distributed generation ("DG") system manufacturers, distributors, marketers and investors, and electric customers, to deploy DG. Its members represent a variety of DG technologies including combined heat and power ("CHP"), renewables, gas turbines, microturbines, reciprocating engines, and storage.[1] Over the years, CCDC has actively participated in various CPUC proceedings relating to DG.

1. CCDC Supports the Commission's Goals.

CCDC appreciates the effort the Commission and staff have devoted to proposing revisions to SGIP. CCDC generally supports the three primary program goals set forth in the Proposed Decision, so long as all eligible technologies are consistently evaluated under the goals:

- Environmental goals, including reduction of greenhouse gas ("GHG") emissions and criteria air pollutants;

[1] CCDC is currently comprised of Capstone Turbine Corporation; Caterpillar, Inc.; DE Solutions, Inc.; EtaGen, Inc.; GE Energy; Hawthorne Power Systems; Holt of California; NRG Energy; Penn Power Systems; Peterson Power Systems; Regatta Solutions; Solar Turbines, Inc.; and Tecogen, Inc.

- Grid support goals, including reduction or shifting of peak demand, improved efficiency and reliability of the distribution and transmission system, lower grid infrastructure costs, provision of ancillary services, and ensuring customer reliability of distributed energy resources; and
- Market transformation.[2]

CCDC's members desire to contribute to achieving these goals. Their ability to do so depends on an SGIP design that ensures a level playing field for all eligible technologies. In the statute that calls for creation of SGIP, the Legislature explicitly recognizes that there is an array of diverse technologies that may be used to achieve GHG emission reductions and other SGIP goals, from renewable technologies and storage, to clean combustion technologies.[3] This is a logical approach, since no single technology is the right fit for every customer. CCDC respectfully requests that the Commission revise the Proposed Decision as recommended herein, to ensure that SGIP is equitably implemented for all of the diverse, SGIP-eligible technologies that support program goals. Specifically, CCDC recommends the following revisions:

(1) Defer adoption of a biogas fuel blending requirement until biogas is available in the pipeline;
(2) Revise the budget allocation so that 50% is allocated to storage and 50% to generation;
(3) Retain the 40% manufacturer cap to ensure diversity within SGIP; and
(4) Revise metering requirements applicable to very small CHP systems, or specify the process for doing so.

2. Clean, Natural Gas-Fueled DG Is an Important Tool, Currently Able to Support the Ongoing Transition to Increased Renewable Generation.

CCDC has long supported clean, efficient, and reliable on-site generation, both natural gas-fueled (primarily CHP or cogeneration) and renewable. CCDC further supports California's efforts to reduce emissions of GHG, and increase renewable generation. CCDC's simultaneous support for *both* clean natural gas-fueled technologies and renewable technologies is grounded in law. Public Utilities Code section 372(a) memorializes state policy "to encourage and support the development of cogeneration as an efficient, environmentally beneficial, competitive energy

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2 Proposed Decision, pp. 9-10.
3 Cal. Pub. Util. Code § 379.6(b) and (c).

resource that will enhance the reliability of local generation supply, and promote local business growth." Additionally, California's renewables portfolio standard laws call for increasing renewable generation with the intent of realizing various benefits, including reducing air pollution and GHG emissions, promoting rate stability, diversifying the generation portfolio, aiding in meeting resource adequacy goals, and promoting safety and reliability.[4]

CCDC understands that as more and more renewable generation comes on line, there will be a shift away from historically traditional natural gas-fueled generation. However, even as California transitions to increased renewable generation, there is and will be a need for clean, natural gas-fueled energy. Natural gas-fueled cogeneration provides benefits – recognized in law – that are complementary to RPS goals. It also fills a gap at customer locations not suited to on-site renewable generation. Accordingly, the state should continue "to encourage and support the development of cogeneration," as well as renewable generation.[5] And, with the right market signals, cogeneration can complement energy storage in alleviating renewable over-generation concerns.

SGIP incentives are critical to promoting various technologies, including CHP, that meet Program goals and eligibility requirements. CCDC is concerned that the Proposed Decision's SGIP revisions would significantly shrink (or possibly eliminate) the already challenging CHP market.[6] The proposal to require use of zero emission fuel starting January 1, 2017 as an SGIP eligibility requirement currently is essentially infeasible, given supply constraints and cost issues. Further, the proposal to allocate 75% of the SGIP budget to storage and 25% to generation, with a 10% carve out for renewable technologies, would drastically limit the CHP market and impede customer choice. These proposed changes would weaken or even eliminate CHP, which is an important tool for achieving GHG emissions reduction and energy reliability goals. In order to avoid this poor result, CCDC recommends that the Commission defer any requirement to blend a zero emission fuel until such fuel is available, and to modify the proposed budget allocation as provided herein.

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4 Cal. Pub. Util. Code § 399.11(b).

5 As noted herein, most natural gas-fueled SGIP technologies will be able to use biogas delivered by pipeline when it becomes available.

6 *See, e.g., A New Generation of Combined Heat and Power: Policy Planning for 2030* (CEC-200-2012-005), Sept. 2012, pp. 41-48 (available at: http://www.energy.ca.gov/2012publications/CEC-200-2012-005/CEC-200-2012-005.pdf).

3. The Proposed Decision Errs in Requiring Minimum Biogas Blending Starting in 2017.

The Commission, after a lengthy formal process, adopted a revised GHG emissions eligibility threshold for SGIP in November 2015.[7] The Proposed Decision acknowledges that the revised SGIP GHG emission factor "will achieve some degree of GHG reductions."[8] Nonetheless, the Proposed Decision would modify this recent Commission action by setting a biogas fuel blending requirement that starts at 10% in 2017 and increases to 100% in 2020, purportedly to "push natural gas fueled technologies further in their GHG reductions" and "support market transformation of zero emission fuels."[9]

In suggesting this approach, the Proposed Decision commits factual error. The Proposed Decision ignores the critical fact that ***in-state directed biogas presently is not readily available by pipeline, and is very costly***.[10] CCDC understands the cost of in-state directed biogas has recently ranged from $10.50 to $14.00 per MMBtu.[11] The average price of natural gas in California has been under $3.00 per MMBtu.[12] The SGIP payment with the prorated biogas adder does not cover the cost of the biogas premium, rendering SGIP uneconomic and, therefore, likely will not prompt the market transformation the Proposed Decision relies on to justify a minimum biogas blending requirement. As the Center for Sustainable Energy ("CSE") pointed out, no evidence has been provided that shows SGIP incentives have prompted development of production of in-state directed biogas and injection into the pipeline.[13] The way to move the gaseous fuel market toward biogas is to establish a Renewables Portfolio Standard-type program, where the price premiums are blended into the gas prices and spread equally among all gas customers, in a similar manner as is done on the electric side.

Most natural gas-fueled SGIP technologies will be able to use biogas delivered by pipeline ***when it becomes available***. Requiring them to use a minimum quantity of biogas before it becomes available will likely cause developers to forego projects, which is contrary to the goal

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7 D.15-11-027.

8 Proposed Decision, p. 20.

9 *Id*.

10 *See, e.g.*, Comments of FCE (March 10, 2016), pp. 4-5 and 6-7; Comments of PG&E (March 10, 2016), pp. 2-3; Comments of SoCalGas (March10, 2016), pp. 3-4; Comments of CCDC (March 10, 2016), pp. 3-4.

11 Comments of FCE (March 10, 2016), p. 5; Comments of SoCalGas (March 10, 2016), p. 4.

12 *See, e.g.*, Staff Proposal, p. 16, footnote 36.

13 Comments of CSE (March 10, 2016), p. 3.

of reducing GHG emissions. The Proposed Decision ignores the fact that not all customers desiring to install on-site generation can use other SGIP-eligible renewable technologies. Wind and solar resources are only intermittently available and thus better suited for electric-only loads. Customers that also have a thermal energy need require a consistent and flexible source of energy, like CHP.[14] Not only would imposition of a minimum biogas requirement eliminate the customer's ability to choose the on-site technology that meets its needs, it also will likely not result in the additional GHG reductions the Proposed Decision seeks. PG&E provided evidence that since the SGIP requirement that directed biogas can only be procured from in-state suppliers was adopted in 2012, only one 500kW biogas project has been built.[15] SGIP generation technologies have driven the most GHG reductions since the inception of SGIP.[16] Taking the CHP option away from customers through arbitrary and premature imposition of a biogas fuel blending requirement has the very real potential of discouraging the development of cleaner generation technologies and related market transformation.[17]

Finally, the proposed biogas blending requirement creates tremendous uncertainty around the reliability of Commission determinations. The proposal would effectively amend the GHG emission factor that was adopted just over six months ago, after parties devoted substantial time and resources to that component of this proceeding. And, it would do so in a manner that unreasonably discriminates against technologies that are able to meet the recently adopted GHG emission reduction factor.

CCDC supports California's efforts to reduce GHG emissions, and the CHP technologies its members promote can contribute to those efforts. CCDC also does not oppose use of biogas, when it becomes available in the pipeline. Unfortunately, the biogas blending requirement in the Proposed Decision is not based on consideration of all of the relevant facts and evidence that have been brought before the Commission and, therefore, is arbitrary. It also poses an unreasonable burden on otherwise eligible SGIP technologies that can meet the revised GHG emission factor and contribute to GHG emission reductions. In other words, the Proposed

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14 Comments of CCDC (March 10, 2016), p. 4.

15 Comments of PG&E (March 10, 2016), p. 3.

16 *Id*. at p. 2 (*citing* 2013 SGIP Impact Evaluation, Self-Generation Incentive Program Reports, Section 7).

17 It is also unclear how a customer would be able to procure a biogas fuel component, particularly for very small systems.

Decision does not result in a level playing field.[18] It subjectively picks winners and losers among technologies that meet eligibility requirements and further state GHG and energy reliability goals. Accordingly, CCDC requests that the Proposed Decision be revised to eliminate a biogas fuel blending requirement for the time being. The Proposed Decision could retain the option of conducting further proceedings on this issue, to the extent in-state, directed biogas becomes available, at reasonable cost.

4. The Budget Allocation in the Proposed Decision Should Be Revised.

The Proposed Decision would adopt the Staff Proposal recommendation to allocate 75% of the SGIP budget to energy storage, and 25% to generation technologies.[19] The Proposed Decision would further carve 10% out of the generation budget for renewable technologies.[20] This approach would effectively convert SGIP into a storage incentive program.

SB 861, which extended SGIP, called for minor program revisions. The law memorializes the Legislature's intent that SGIP "increase deployment of ***distributed generation and energy storage systems***" to achieve program goals.[21] It does not state a preference for generation or storage, nor does it establish a requirement, much less recommend or encourage the Commission, to skew the incentive budget so markedly toward storage. While CCDC agrees with the Staff Proposal and the Proposed Decision that it is appropriate, going forward, to divide the SGIP budget between two categories, generation and storage, there does not appear to be a reasonable basis for heavily favoring storage compared to generation, as the Proposed Decision would do.

The record before the Commission supports a more reasonable, less arbitrary allocation of funds, consistent with legislative intent. The Proposed Decision finds that a "significant weighting" of SGIP incentives for storage is warranted "in light of the program's goals."[22] However, the Staff Proposal, and presumably the Proposed Decision, primarily focus on which technologies have dominated use of SGIP funds (*i.e.*, storage), rather than carefully analyzing how both of the categories of technologies the law seeks to support (*i.e.* generation ***and*** storage) further program goals. The technologies that received the most program monies are those that

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18 CCDC appreciates that a level playing field is proposed for the generation category, and recommends that the same approach be applied to storage.

19 Proposed Decision, p. 21.

20 *Id*.

21 Cal. Pub. Util. Code § 379.6(a).

22 Proposed Decision, pp. 21-22.

were eligible for the richest incentives, and not necessarily those which best met program goals.[23] The Staff Proposal does not take the next step and analyze whether the proposed reduced storage incentive would warrant a decrease in the storage budget allocation.

Additionally, the Staff Proposal's cursory analysis regarding the proposed 75%/25% split was based on the assumption that certain generation technologies would be eliminated from eligibility for SGIP.[24] The Proposed Decision properly finds that electric-only fuel cells and microturbines should remain eligible for SGIP, assuming they meet applicable requirements.[25] The proposed budget split should be modified to reflect this important correction of the erroneous analysis in the Staff Proposal.

Parties identified other facts showing the potential for increased deployment of clean, onsite CHP (that furthers program goals) that do not appear to have been taken into consideration in the Proposed Decision. For example, Fuel Cell Energy, Inc. ("FCE") demonstrated that there is substantial market potential for such generation.[26] CCDC explained the impact that existing measurement, verification, and administrative costs have on very small (*i.e.*, 500kW to 600kW and under) CHP projects.[27] Specifically, those costs can swamp an SGIP incentive for smaller systems, such that these projects to do not apply for incentives.[28] CCDC has proposed a reasonable alternative to costly current requirements for very small systems that, if adopted, would enable smaller generation systems to participate in SGIP.[29]

While the state has long supported CHP because of the emissions reduction and reliability benefits it provides, it also has long recognized that there are significant barriers to CHP.[30] These barriers have precluded CHP from achieving its potential. In addition to harming the state's ability to meet GHG emissions reductions and reliability goals, these barriers directly impact customers, by impeding customer choice. CHP is ideally suited for customers with a thermal load. If such customers are not able to choose CHP because of a small, potentially quickly exhausted SGIP budget, then the customer will be limited to procuring energy from the

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23 Staff Proposal, p. 23.
24 Staff Proposal, pp. 22-23.
25 *Id*. at p. 16.
26 Comments of FCE (January 7, 2016), pp. 15-16.
27 Comments of CCDC (January 7, 2016), pp. 14-15.
28 *Id*. at p. 14.
29 *Id*. at pp. 14-15.
30 See footnote 3 above.

grid and installing a boiler, which will actually increase grid emissions, compared to a CHP system.

Taking the law and all of these facts into consideration, CCDC respectfully submits that splitting the budget equally between storage and generation would be a more reasonable, less arbitrary approach.[31] It would avoid the situation where one type of technology is able to essentially monopolize the program budget, thereby better meeting program goals. It would more accurately reflect the potential for generation, and it would be based on the record in this proceeding.

5. A 40% Manufacture Cap Should Be Maintained to Ensure Diversity Within SGIP.

The Proposed Decision correctly states that "[t]he manufacturer cap was originally adopted to promote diversity within the program and prevent any single participant from garnering an inequitable share of funds."[32] Nonetheless, the Proposed Decision would replace the 40% manufacturer cap with a 20% developer cap.[33] CCDC is concerned that this shift from manufacturer to developer cap will not promote diversity because it increases the potential for an entity to receive a disproportionate share of SGIP funds. Accordingly, CCDC recommends maintaining a 40% manufacturer cap to ensure diversity within SGIP and minimize the potential for lopsided incentives.

Advanced Energy Storage ("AES") installers/developers may integrate battery packs manufactured by other companies into their own proprietary AES systems, using their own branding, thereby masking the battery manufacturer. Fuel cell and CHP equipment suppliers typically are branded under the original manufacturer. Under the Proposed Decision's proposed installer/developer cap, multiple distributors and/or dealers of a single fuel cell or CHP prime mover manufacturer could take the majority of SGIP generation category funds, which is inconsistent with the goal of promoting diversity. CCDC supports maintaining a statewide manufacturer cap to ensure a single manufacture does not receive an overwhelming share of program funds.

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31 *See, e.g.*, Comments of FCE (January 7, 2016), p. 18; Comments of SoCalGas (January 7, 2016), p. 8.

32 Proposed Decision, p. 32.

33 *Id*. at p. 33.

6. The Commission Should Address Metering Requirements Applicable to Very Small Systems in the Proposed Decision, or Designate a Process for Doing So.

CCDC understands the importance of ensuring SGIP funds are well spent, including ensuring energy savings and GHG reductions over the term of the SGIP payment stream. However, as noted in prior comments, the current measurement, verification, and administrative costs borne by CHP applications are particularly burdensome for very small (*i.e.*, 500kW to 600kW and under) projects.[34] The cost of metering and monitoring equipment significantly increases overall project costs, and creates a real barrier for many projects. For very small projects, these costs equal most of an SGIP incentive, and can even exceed it. This barrier has precluded otherwise viable and beneficial generation projects from seeking SGIP funds.

CCDC reiterates that it is not opposed to providing data necessary to verify performance for purposes of incentive payments. Rather, CCDC proposes that metering requirements be set commensurate with size. CCDC has proposed alternatives to costly current requirements for consideration.[35] The Proposed Decision is silent on this issue. CCDC requests that it be revised to adopt CCDC's recommendations for performance verification alternatives, or that it specify the process for considering such alternatives.

7. The Determination of Eligible Technologies in the Proposed Decision Should Be Adopted.

The Proposed Decision provides that "[a]s long as a technology meets the performance and reporting standards set forth in D.15-11-027 [GHG emission factor], then that technology should be deemed to have met the GHG reduction requirement."[36] The Proposed Decision corrects an error in the Staff Proposal regarding microturbines and electric-only turbines operating natural gas, and concludes that both technologies should be eligible for SGIP if they are certified to emit less than the first-year emission rate for the program year for which incentives are sought.[37]

CCDC appreciates the Proposed Decision's consideration of and conclusion regarding this important issue, and urges adoption of this aspect of the Proposed Decision.[38]

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34 Comments of CCDC (January 7, 2016), p. 14.
35 Comments of CCDC (January 7, 2016), p. 14.
36 Proposed Decision, p. 16.
37 *Id*. at pp. 16-17.
38 *See*, Comments of CCDC (January 7, 2016), pp. 4-8.

8. Conclusion.

CCDC appreciates the Commission's consideration of these comments and respectfully requests that the Proposed Decision be modified as set forth herein. Proposed Findings of Fact, Conclusions of Law, and Ordering Paragraphs are provided in Attachment A hereto.

DATED: June 6, 2016

DAY CARTER & MURPHY LLP

By: /s/ Ann L. Trowbridge

Ann L. Trowbridge
3620 American River Drive, Suite 205
Sacramento, California 95864
Telephone: (916) 246-7303
E-mail: atrowbridge@daycartermurphy.com
Attorneys for California Clean DG Coalition

ATTACHMENT A

Proposed Findings of Fact, Conclusions of Law,

and Ordering Paragraphs

Note: Proposed additions shown with underline; proposed deletions shown with strikethrough.

Proposed Findings of Fact ("FofF")

11. On the topic of whether to require all natural gas fueled generation technologies to blend some quantity of zero emission fuel as a pre-condition of participating in the SGIP program, ~~Bloom Energy's proposal represents the most balanced proposal to set a requirement for minimum zero emission fuel blending and is reasonable, with one significant change, which is to set a minimum fuel blending requirement starting in 2017~~ Energy Division shall monitor the availability and cost of directed, in-state biogas, and propose a minimum zero emission fuel blending schedule for comment when such biogas becomes available in the pipeline.

12. ~~While~~ The Staff Proposal's recommendation to keep microturbines and electric-only fuel cells out of the Program is not adopted, and it is reasonable to ~~significantly~~ equally weigh ~~of~~ incentives in the budget ~~towards~~for energy storage and generation ~~is justified~~ in light of the program's goals of reducing GHGs, providing grid support and enabling market transformation.

15. Delete in entirety.

31. The application of a manufacturer's cap ~~is cumbersome and increases uncertainty for project developers who have limited insight into a given manufacturer's progress towards a cap~~ promotes diversity within the program and prevents any single participant from garnering an inequitable share of program funds, which ~~limits~~ improves customers' ability to choose the specific technology that best meets their needs.

32. Maintaining a 40% manufacturer ~~A 20% developer~~ cap will ensure diversity and prevent gaming by program participants.

33. The current policy of a state-wide cap for ~~developers~~ manufacturers is most consistent with the policy goals of the program.

New FofF: Energy Division shall conduct a workshop to develop alternative performance verification measures for very small (i.e., 500kW to 600kW and under) CHP systems.

Proposed Conclusions of Law

9. Replace with: Energy Division shall monitor the availability and cost of directed, in-state biogas, and propose a minimum zero emission fuel blending schedule for comment when such biogas becomes available in the pipeline.

10. Regarding the incentive budget, the ~~Staff Proposal's 75%/25%~~ incentive budget shall be split equally (*i.e.*, 50%/50%) between the generation and storage categories.

26. The 40% manufacturer cap is ~~removed from~~ maintained in the SGIP.

27. Delete in entirety.

28. The current policy of a state-wide cap for ~~developers~~ manufacturers is most consistent with the policy goals of the program and is retained.

Proposed Ordering Paragraphs

1.d. Delete in entirety.

1.g. Replace with: The state-wide 40% manufacturer cap is retained.